

## Equation 1

$$V_X = \frac{\frac{R_2 \cdot R_{20}}{R_2 + R_{20}}}{\frac{R_1 \cdot R_{10}}{R_1 + R_{10}} + \frac{R_2 \cdot R_{20}}{R_2 + R_{20}}} \times V_{cc}$$

$$V_Y = \frac{\frac{R_4 \cdot R_{40}}{R_4 + R_{40}}}{\frac{R_3 \cdot R_{30}}{R_3 + R_{30}} + \frac{R_4 \cdot R_{40}}{R_4 + R_{40}}} \times V_{cc}$$

$$V_Z = \frac{R_6}{\frac{R_5 \cdot R_{50}}{R_5 + R_{50}} + R_6}$$

FIG. 1

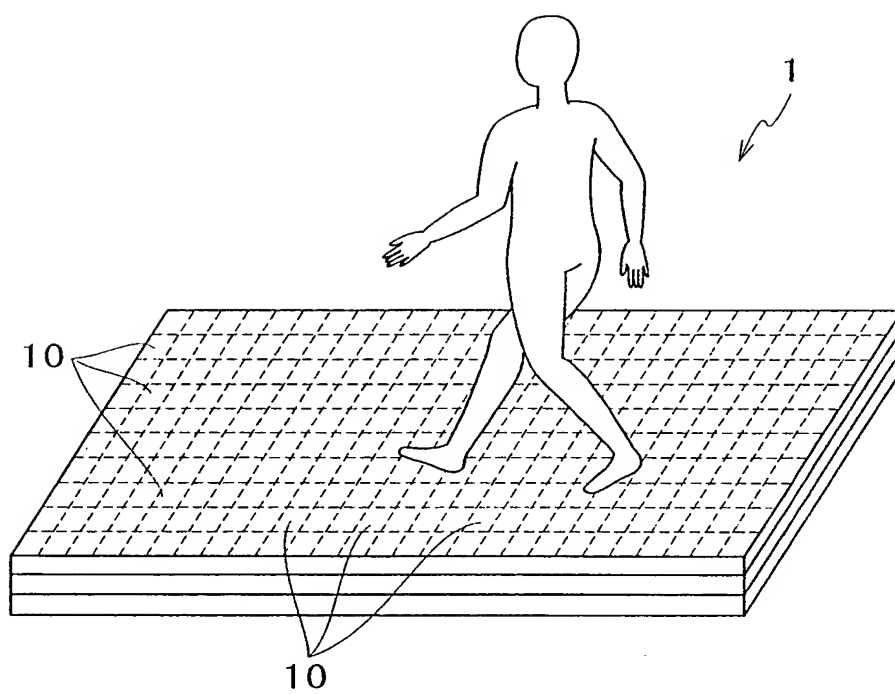


FIG. 2

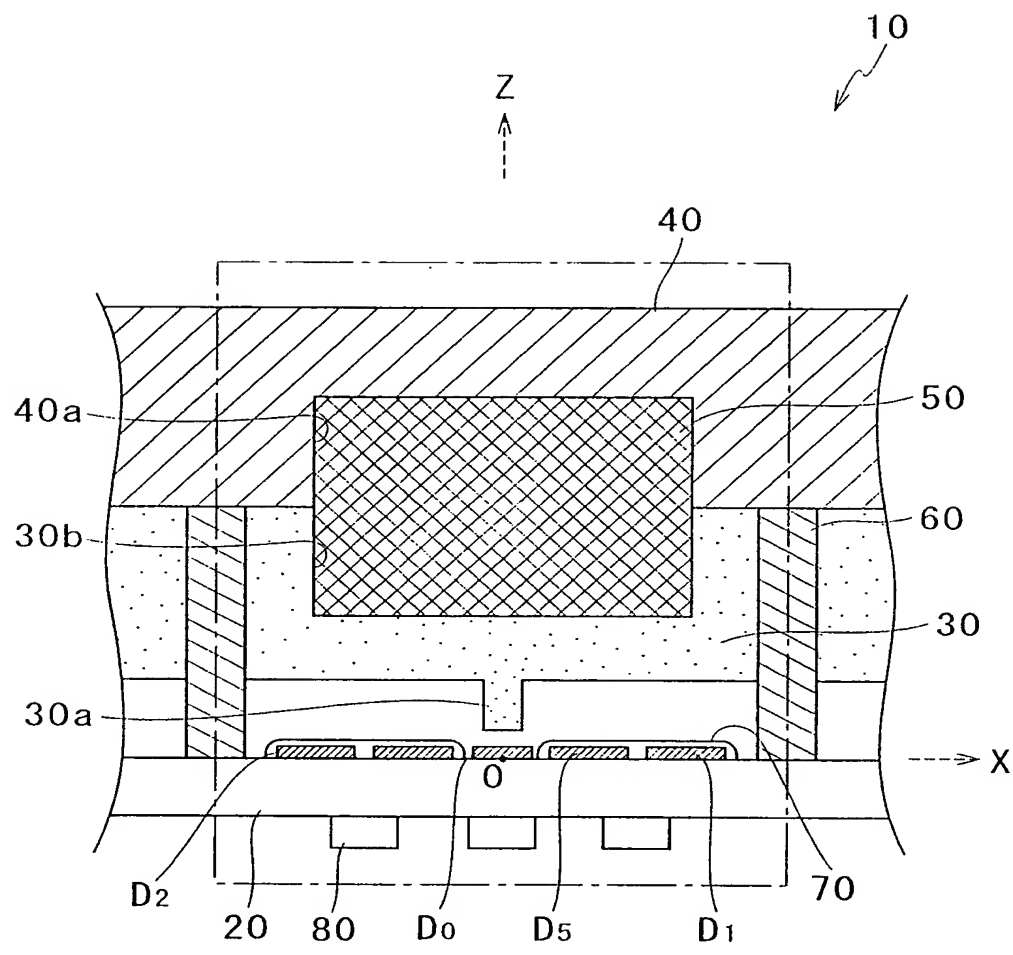


FIG. 3

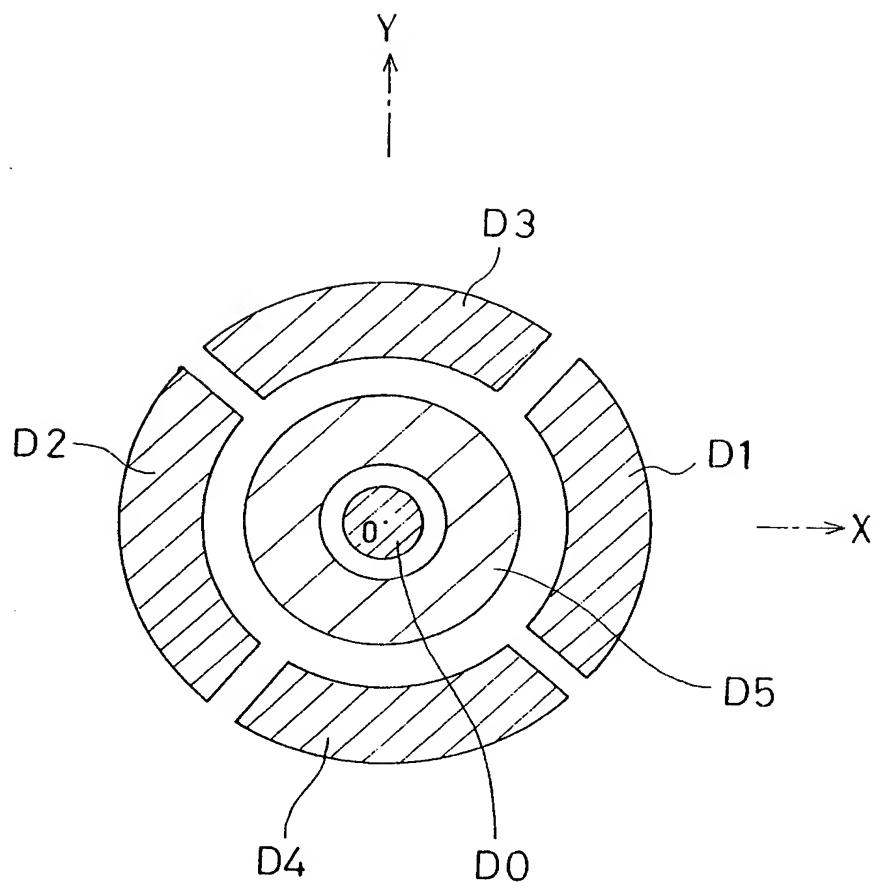


FIG. 4

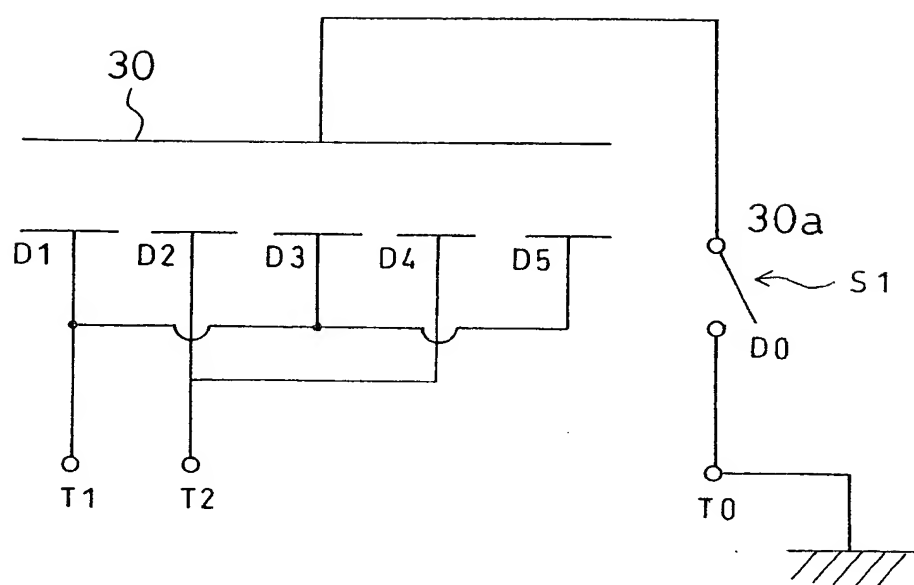
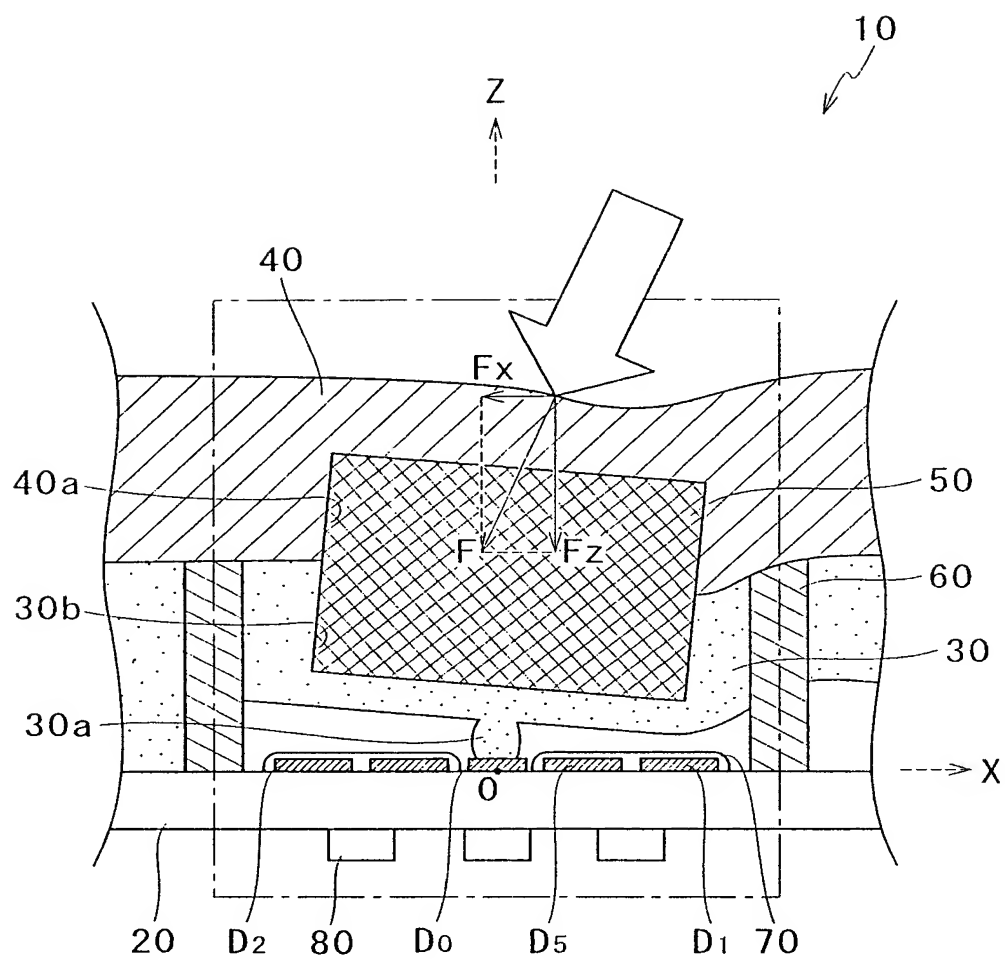


FIG. 5



The diagram illustrates a 3-bit digital-to-analog converter (DAC) circuit. It features a common input bus on the left, which is connected to ground through a switch  $S_1$ . This bus is also connected to a series of five capacitors, labeled  $C_1$  through  $C_5$ . Each capacitor is connected to a corresponding 'C/V CONVERSION CIRCUIT' block. The first four blocks (for  $C_1$  to  $C_4$ ) have two outputs each, labeled  $T_1$  and  $T_2$ . The fifth block (for  $C_5$ ) has one output labeled  $T_1$ . The outputs  $T_1$  and  $T_2$  from the first four blocks are connected to a single inverter, which produces the output voltage  $V_x$ . The outputs  $T_1$  and  $T_2$  from the fifth block are connected to another inverter, which produces the output voltage  $V_y$ . The output  $T_1$  from the sixth block is connected to a third inverter, which produces the output voltage  $V_z$ . A sixth capacitor,  $C_6$ , is connected to ground and is not part of the main signal path.

FIG. 7

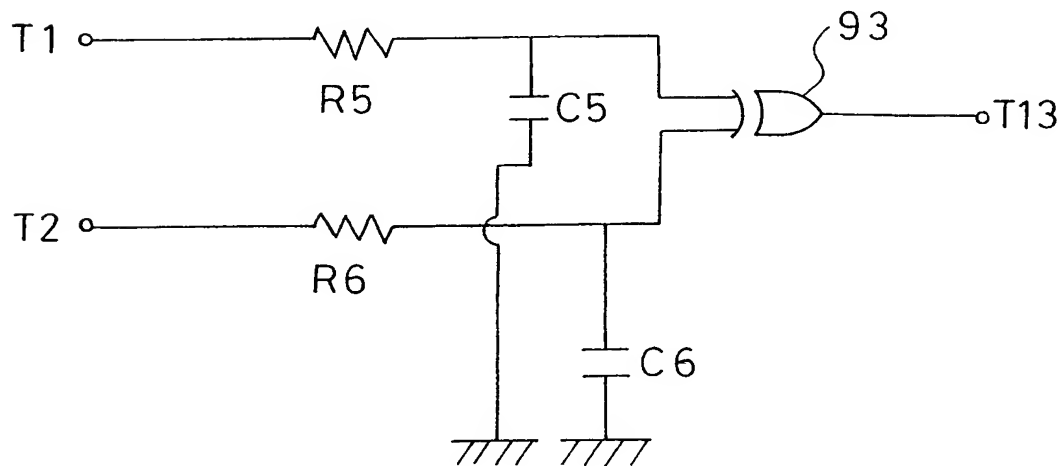
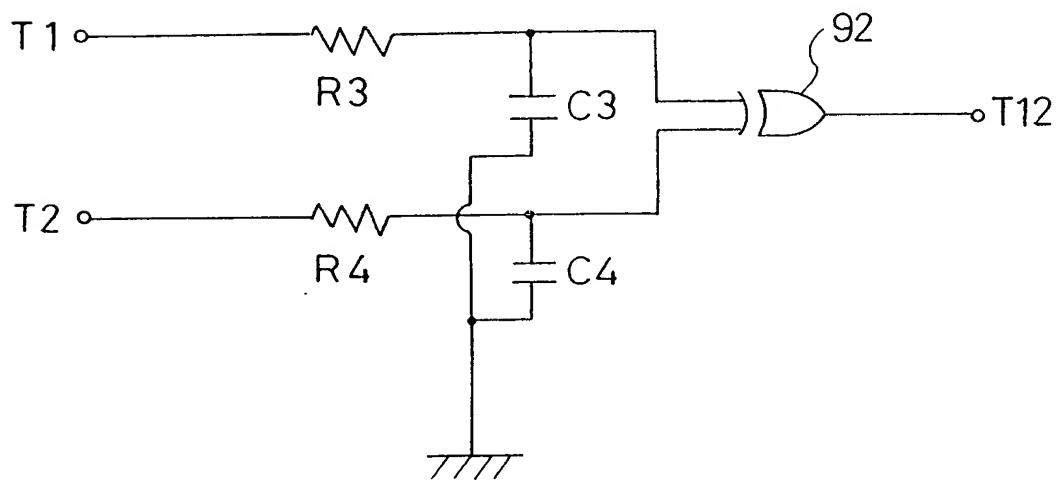
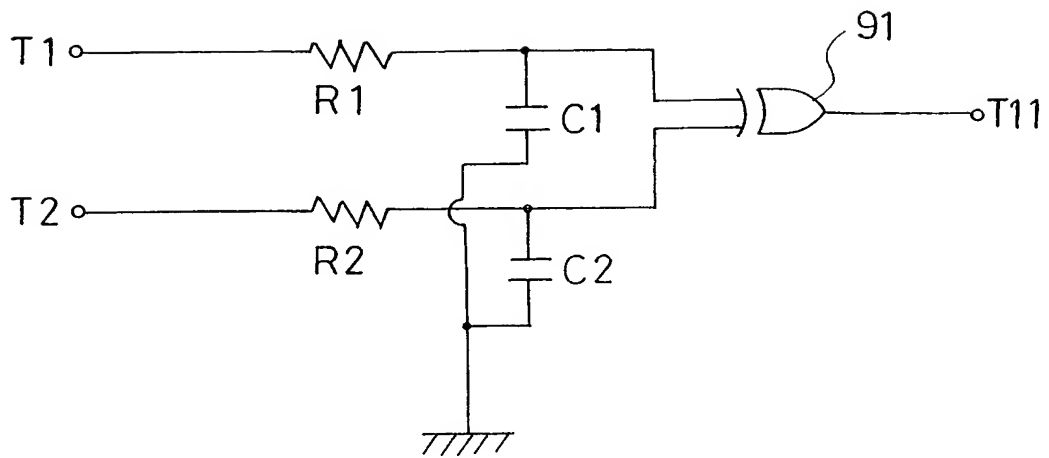


FIG. 8

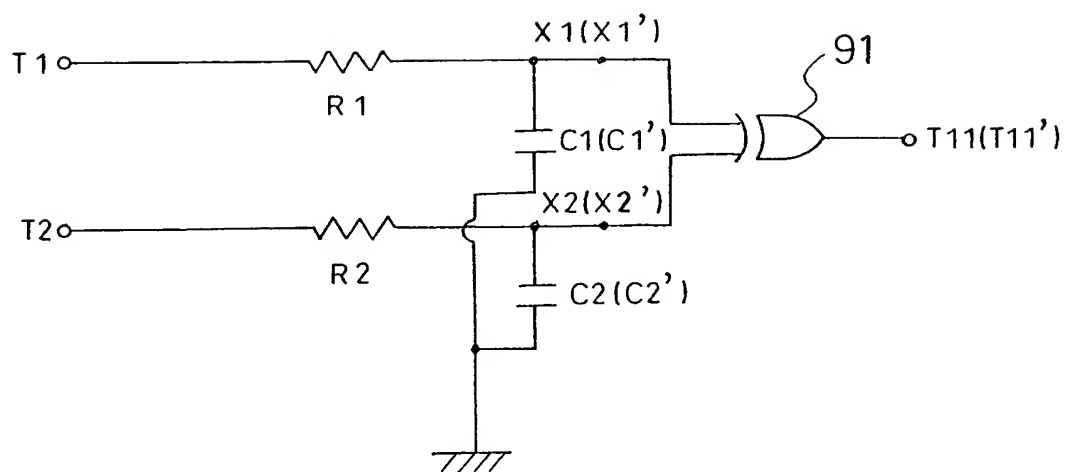


FIG. 9

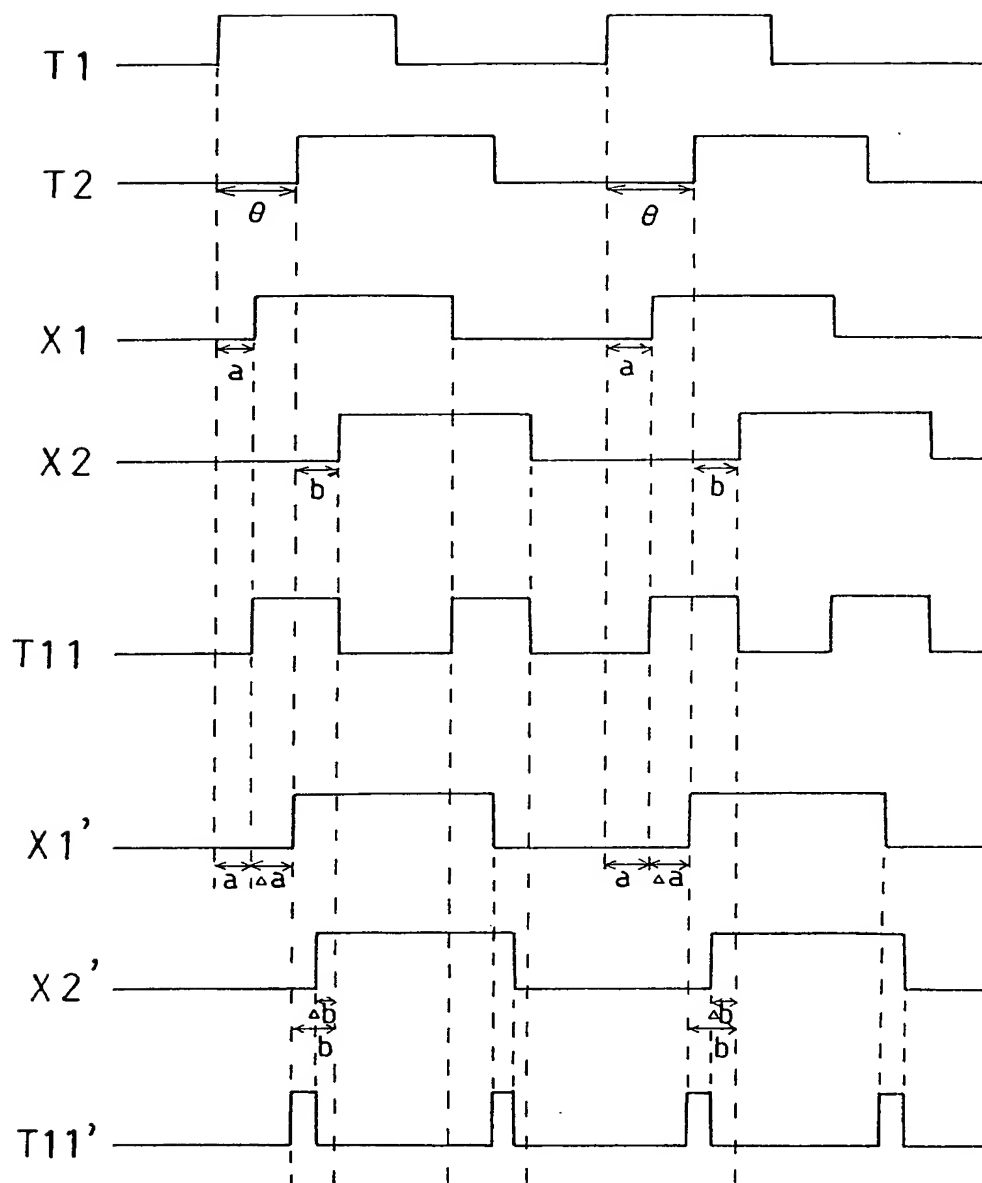


FIG. 10

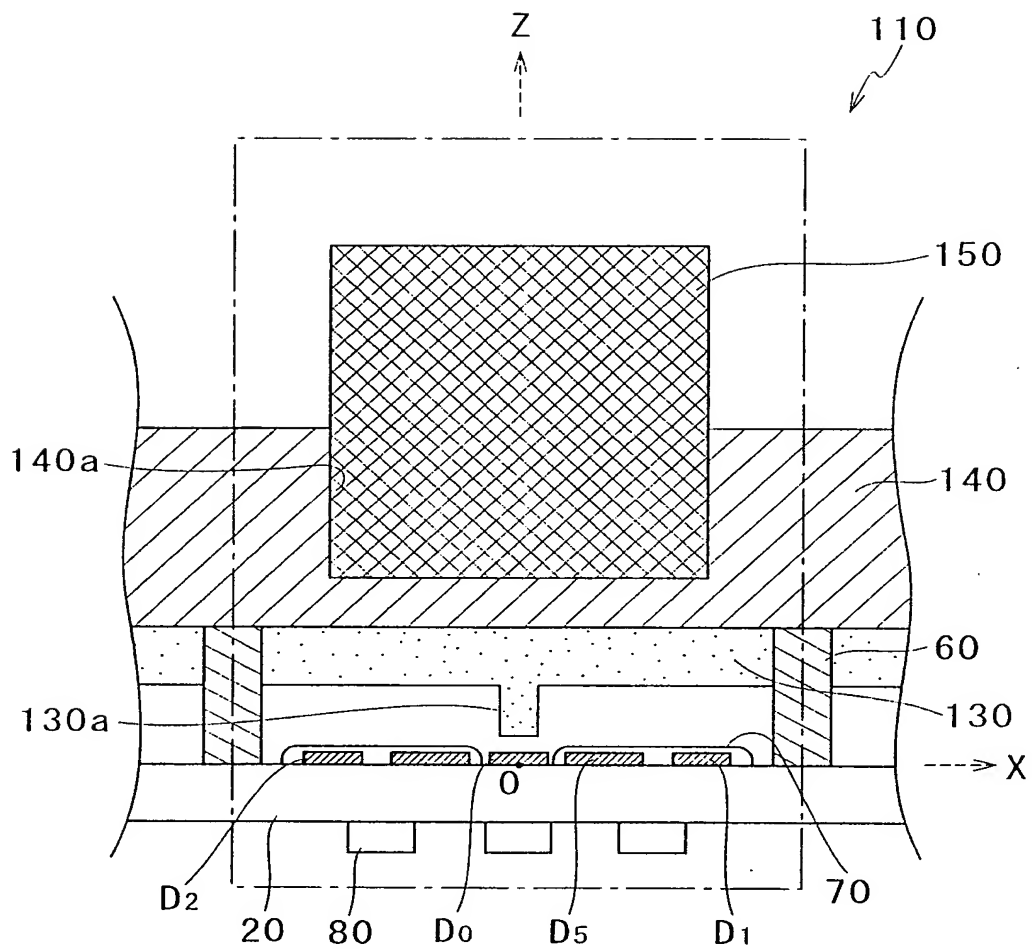


FIG. 11

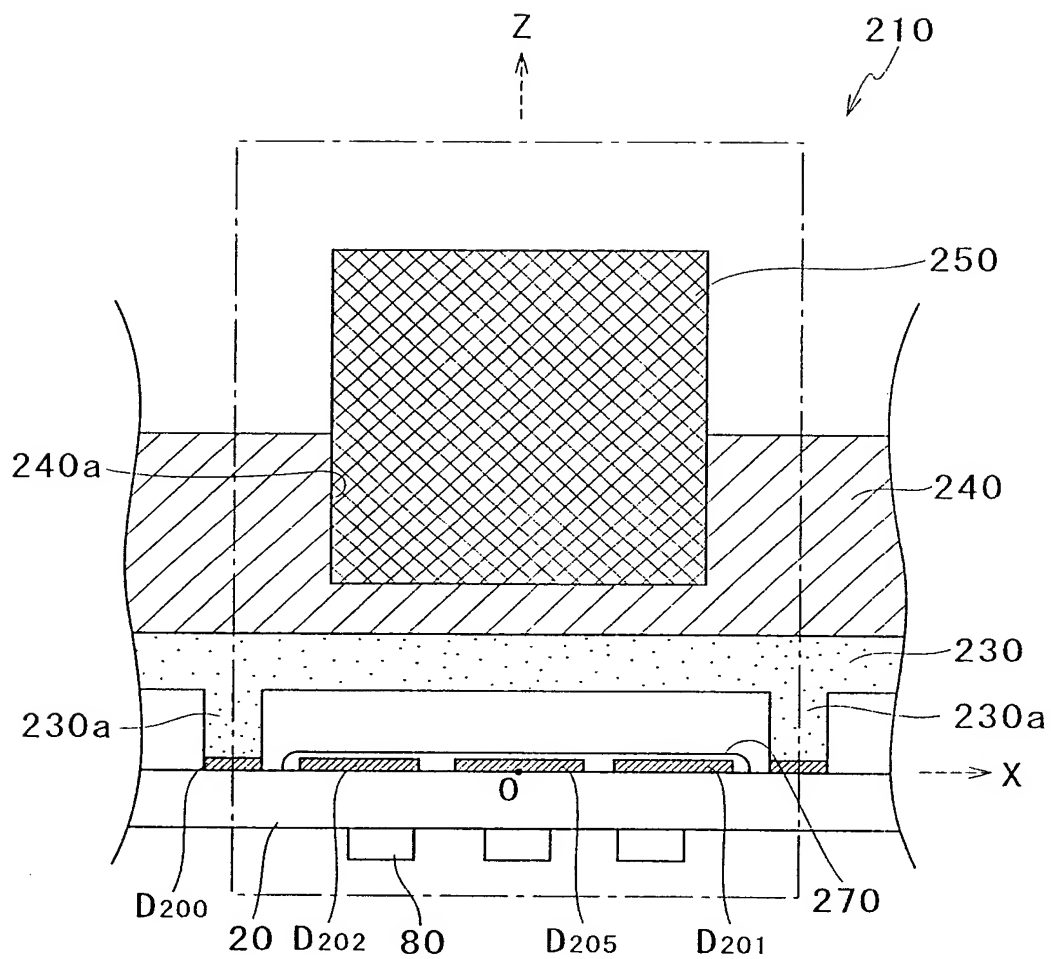


FIG. 12

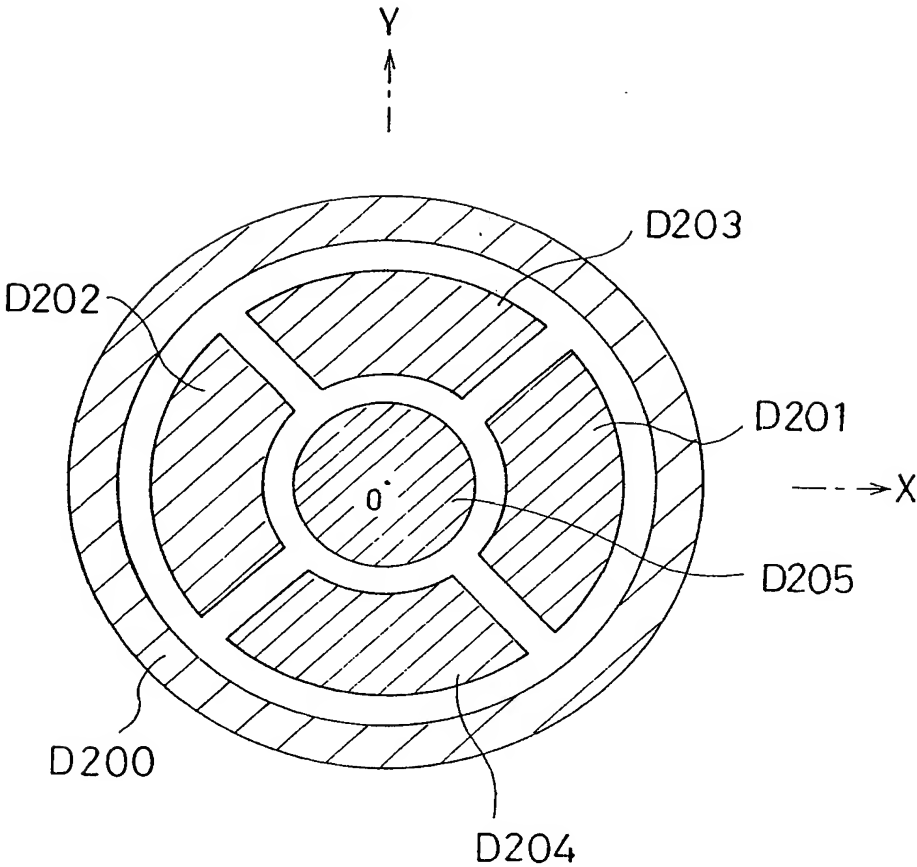


FIG. 13

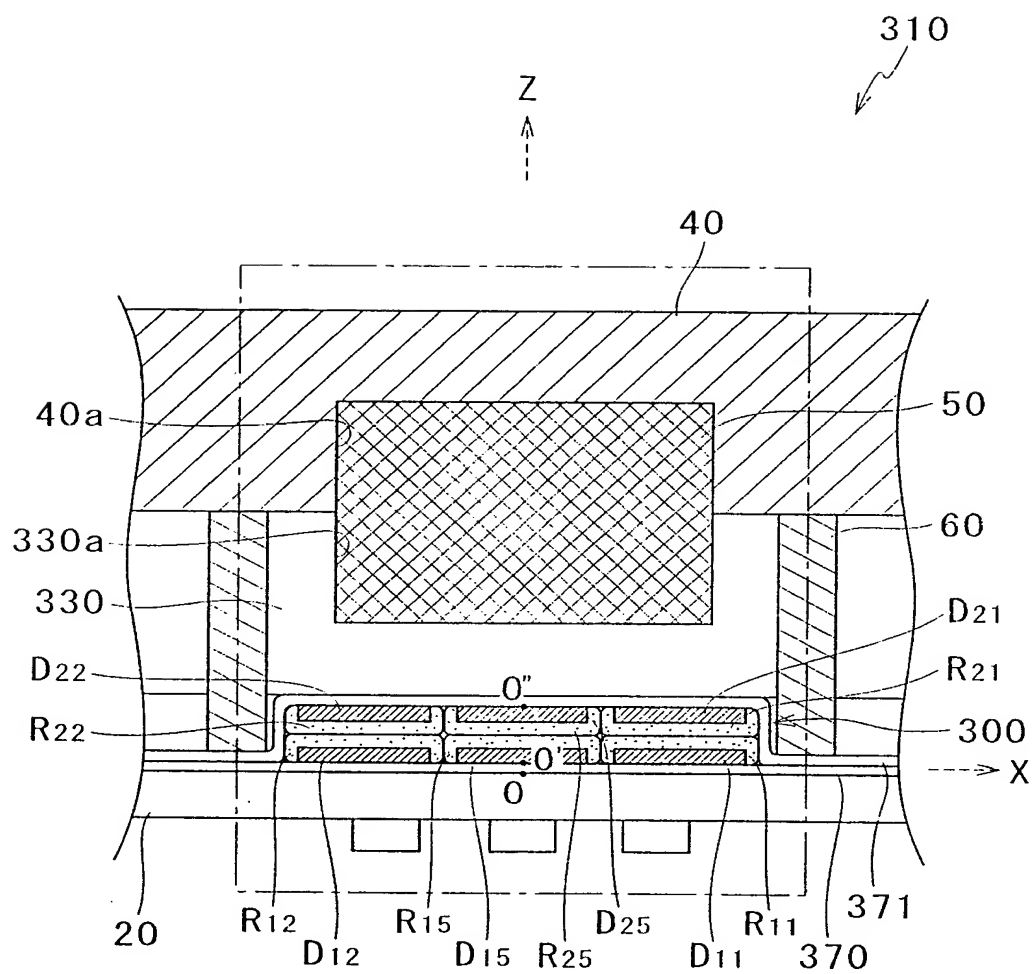


FIG. 14

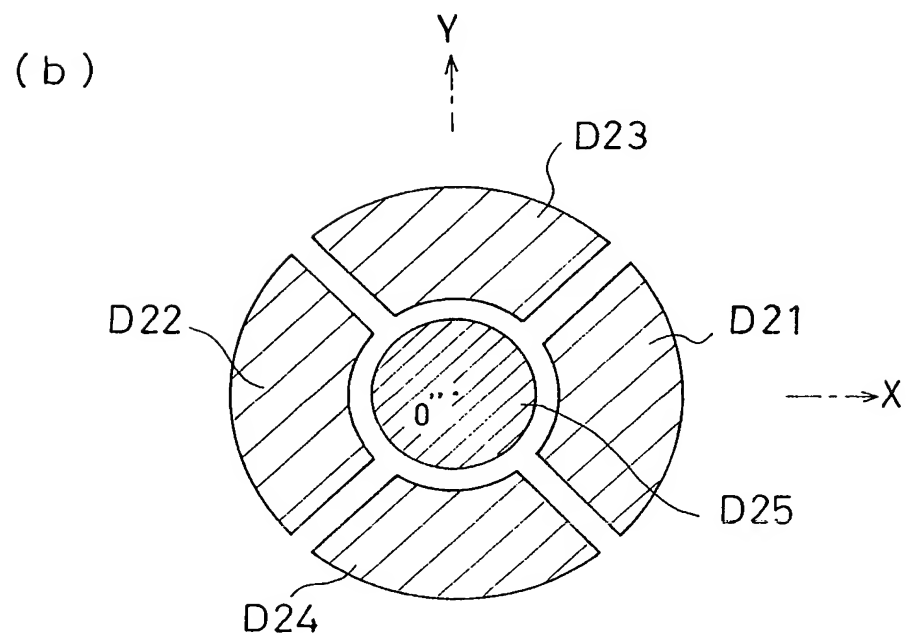
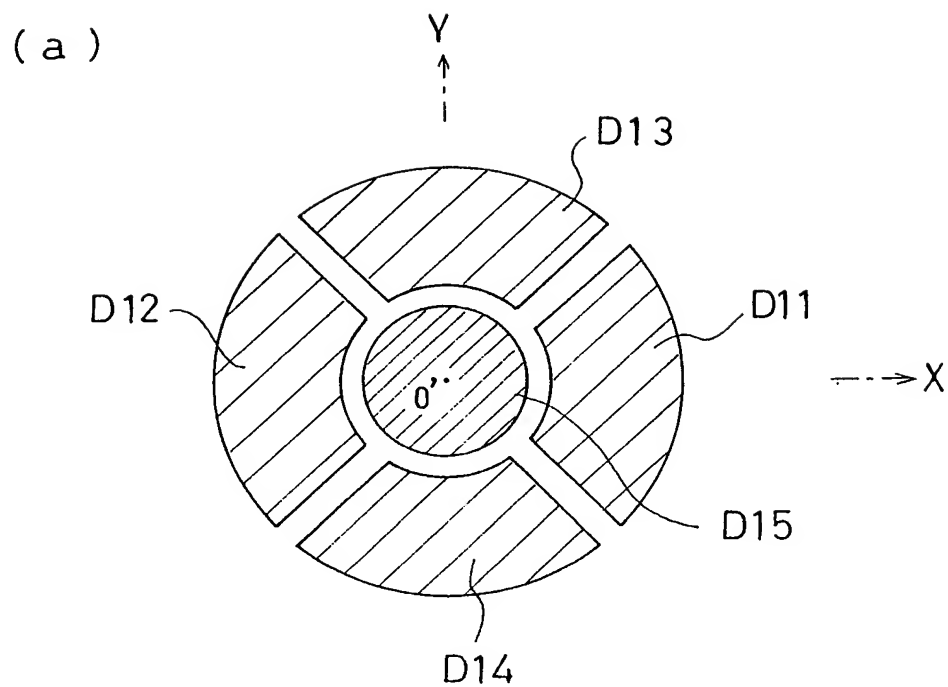


FIG. 15

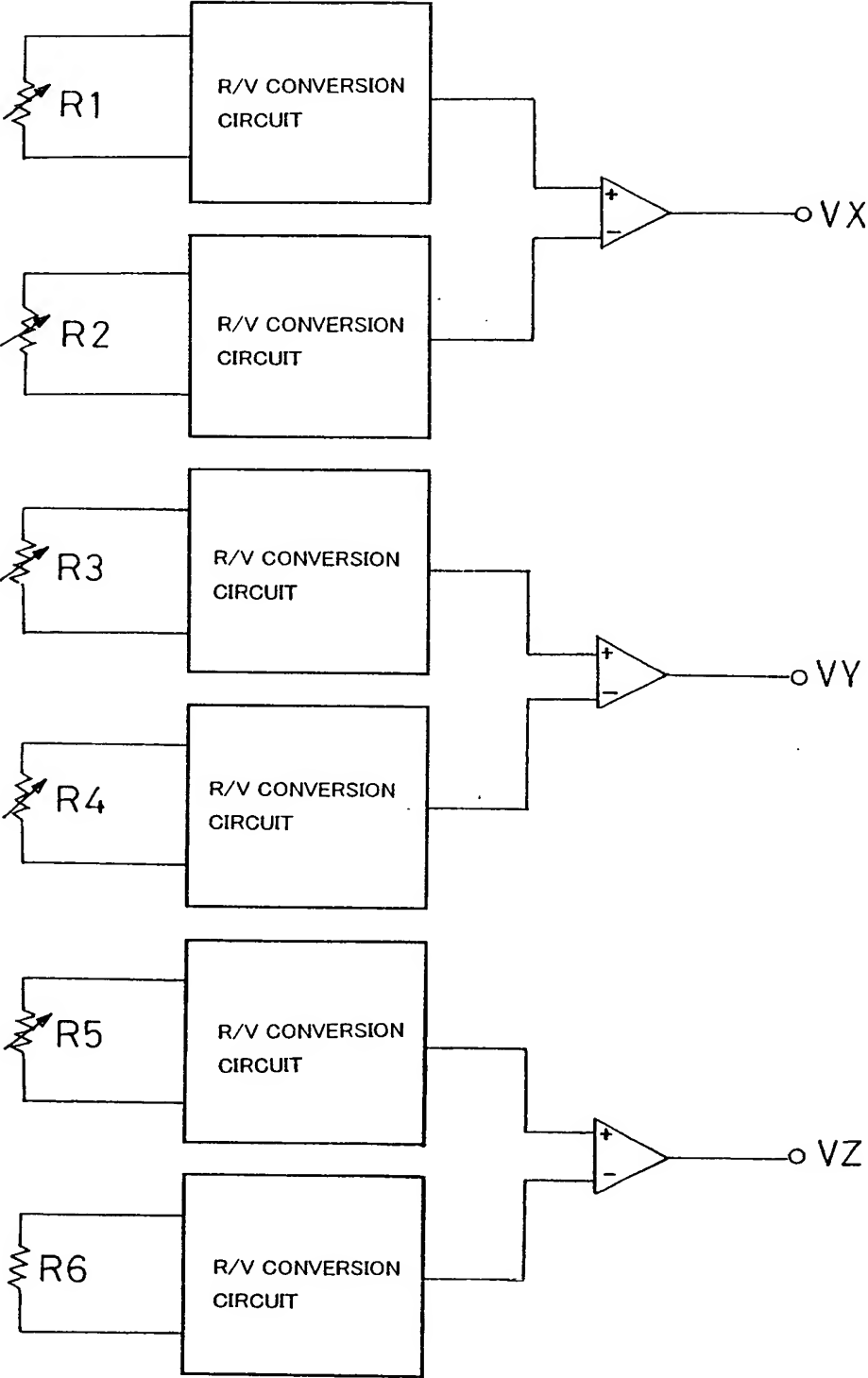


FIG. 16

